

Express Mail No. EL 599583895 US
Mailed October 27, 2000
Patent Docket P1777R1

USPTO
JC931 U.S. PTO
09/698705
10/27/00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Brigitte Devaux et al. Serial No.: To be assigned Filed: October 27, 2000 For: Anti-Tumor Antibody Compositions and Methods of Use	Group Art Unit: To be assigned Examiner: To be assigned
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CERTIFICATE RE: SEQUENCE LISTING

Box Patent Applications
Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

I hereby state that the Sequence Listing submitted herewith is submitted in paper copy and a computer-readable diskette, and that the information recorded in computer readable form is identical to the written sequence listing.

Respectfully submitted,

GENENTECH, INC.

Date: October 27, 2000

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Sequence Listing

<110> Devaux, B.
Keller, G.
Koeppen, H.
Lasky, L.

<120> Anti-Tumor Antibody Compositions and Methods of Use

<130> P1777R1

<141> 2000-10-27

<150> US 60/162,558
<151> 1999-10-29

<150> US 60/182,872
<151> 2000-02-16

<160> 25

<210> 1
<211> 123
<212> PRT
<213> Homo sapiens

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1 5 10 15
Gln Pro Gly Thr Ala Leu Leu Cys Tyr Ser Cys Lys Ala Gln Val
20 25 30
Ser Asn Glu Asp Cys Leu Gln Val Glu Asn Cys Thr Gln Leu Gly
35 40 45
Glu Gln Cys Trp Thr Ala Arg Ile Arg Ala Val Gly Leu Leu Thr
50 55 60
Val Ile Ser Lys Gly Cys Ser Leu Asn Cys Val Asp Asp Ser Gln
65 70 75
Asp Tyr Tyr Val Gly Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp
80 85 90
Leu Cys Asn Ala Ser Gly Ala His Ala Leu Gln Pro Ala Ala Ala
95 100 105
Ile Leu Ala Leu Leu Pro Ala Leu Gly Leu Leu Leu Trp Gly Pro
110 115 120

Gly Gln Leu

<210> 2

<211> 372

<212> DNA

<213> Homo sapiens

<400> 2

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Met Lys Ala Val Leu Leu Ala Leu Leu Met Ala Gly
1 5 10

ttg gcc ctg cag cca ggc act gcc ctg ctg tgc tac tcc 75
Leu Ala Leu Gln Pro Gly Thr Ala Leu Leu Cys Tyr Ser
15 20 25

tgc aaa gcc cag gtg agc aac gag gac tgc ctg cag gtg 114
Cys Lys Ala Gln Val Ser Asn Glu Asp Cys Leu Gln Val
30 35

gag aac tgc acc cag ctg ggg gag cag tgc tgg acc gcg 153
Glu Asn Cys Thr Gln Leu Gly Glu Gln Cys Trp Thr Ala
40 45 50

cgc atc cgc gca gtt ggc ctc ctg acc gtc atc agc aaa 192
Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
55 60

ggc tgc agc ttg aac tgc gtg gat gac tca cag gac tac 231
Gly Cys Ser Leu Asn Cys Val Asp Asp Ser Gln Asp Tyr
65 70 75

tac gtg ggc aag aag aac atc acg tgc tgt gac acc gac 270
Tyr Val Gly Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp
80 85 90

ttg tgc aac gcc agc ggg gcc cat gcc ctg cag ccg gct 309
Leu Cys Asn Ala Ser Gly Ala His Ala Leu Gln Pro Ala
95 100

gcc gcc atc ctt gcg ctg ctc cct gca ctc ggc ctg ctg 348
Ala Ala Ile Leu Ala Leu Leu Pro Ala Leu Gly Leu Leu
105 110 115

ctc tgg gga ccc ggc cag cta tag 372
Leu Trp Gly Pro Gly Gln Leu Xaa
120 124

<210> 3

<211> 96

<212> PRT

<213> Mus musculus

<400> 3

Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
1 5 10 15

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln
20 25 30

Ser Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly
35 40 45

Val Pro Asp Arg Phe Ser Gly Ser Gly Thr Val Phe Thr
50 55 60

Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr
65 70 75

Cys Met Gln His Leu Glu Ser Pro Phe Thr Phe Gly Ser Gly Thr
80 85 90

Lys Leu Glu Ile Lys Arg
95

<210> 4

<211> 115

<212> PRT

<213> Mus Musculus

<220>

<221> unsure

<222> 46-48, 50-52

<223> unknown amino acid

<400> 4

Glu Leu Val Lys Pro Gly Ala Pro Val Lys Leu Ser Cys Lys Ala
1 5 10 15

Ser Gly Tyr Thr Phe Thr Asn Tyr Trp Met Asn Trp Val Lys Gln
20 25 30

Arg Pro Gly Arg Gly Leu Glu Trp Ile Gly Arg Ile Asp Pro Ser
35 40 45

Xaa Xaa Xaa Thr Xaa Xaa Xaa Gln Thr Phe Lys Asp Lys Ala Thr
50 55 60

Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Ile Gln Leu Ser
65 70 75

Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Ile Thr
80 85 90

Ala Ala Ile Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr
95 100 105

Val Ser Ser Ala Lys Thr Thr Gly Pro Ser
110 115

<210> 5
<211> 113
<212> PRT
<213> Mus musculus

<400> 5
Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro
1 5 10 15

Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu
20 25 30

His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro
35 40 45

Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala
50 55 60

Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala
65 70 75

Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val
80 85 90

Tyr Tyr Cys Leu Gln His Leu Glu Tyr Pro Tyr Thr Phe Gly Gly
95 100 105

Gly Thr Lys Leu Glu Leu Lys Arg
110

<210> 6
<211> 124
<212> PRT
<213> Mus musculus

<400> 6
Gln Val Gln Val Gln Gln Pro Gly Ala Glu Leu Val Lys Pro Gly
1 5 10 15

Ala Pro Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
20 25 30

Asn Tyr Trp Leu Asn Trp Val Lys Gln Arg Pro Gly Arg Gly Leu
35 40 45

Glu Trp Ile Gly Arg Ile Asp Pro Ser Asp Ser Glu Ile His Tyr
50 55 60

Asp Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Val Asp Lys Ser
65 70 75

Ser Ser Thr Ala Tyr Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp
80 85 90

Ser Ala Val Tyr Tyr Cys Ala Leu Thr Gly Ile Tyr Ala Met Ala
95 100 105

Tyr Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys Thr
110 115 120

Thr Gly Pro Ser

<210> 7
<211> 113
<212> PRT
<213> Mus musculus

<400> 7
Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile
1 5 10 15

Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu
20 25 30

Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro
35 40 45

Gly Gln Ser Pro Lys Arg Leu Ile Tyr Leu Val Ser Thr Leu Asp
50 55 60

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp
65 70 75

Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Leu Gly Val
80 85 90

Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Arg Thr Phe Gly Gly
95 100 105

Gly Thr Lys Leu Glu Ile Lys Arg
110

<210> 8
<211> 121
<212> PRT
<213> Mus musculus

<400> 8

Glu	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro	Asp	Leu	Glu	Lys	Pro	Gly
1				5				10				15		

Ala Ser Val Lys Ile Ser Cys Lys Pro Ser Gly Asn Ser Phe Thr

20				25				30						
----	--	--	--	----	--	--	--	----	--	--	--	--	--	--

Gly Tyr Tyr Ile His Trp Val Lys Gln Ser His Gly Lys Ser Leu

35				40				45						
----	--	--	--	----	--	--	--	----	--	--	--	--	--	--

Glu Trp Ile Gly Arg Val Asp Pro Asn Asn Gly Phe Thr Ser Tyr

50				55				60						
----	--	--	--	----	--	--	--	----	--	--	--	--	--	--

Asn Gln Lys Phe Lys Gly Lys Ala Ile Leu Thr Val Asp Lys Ser

65				70				75						
----	--	--	--	----	--	--	--	----	--	--	--	--	--	--

Ser Ser Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp

80				85				90						
----	--	--	--	----	--	--	--	----	--	--	--	--	--	--

Ser Ala Val Tyr Tyr Cys Val Gly Asn Phe Phe Asp Ser Trp Gly

95				100				105						
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Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Lys Thr Thr Gly Pro

110				115				120						
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Ser

<210> 9
<211> 118
<212> PRT
<213> Mus musculus

<400> 9

Pro	Gly	Ala	Glu	Leu	Val	Lys	Pro	Gly	Ala	Pro	Val	Lys	Leu	Ser
1					5				10				15	

Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr Trp Met Asn Trp

20				25				30						
----	--	--	--	----	--	--	--	----	--	--	--	--	--	--

Val Lys Gln Arg Pro Gly Arg Gly Leu Glu Trp Ile Gly Arg Ile

35				40				45						
----	--	--	--	----	--	--	--	----	--	--	--	--	--	--

Asp Pro Ser Asp Ser Glu Thr Gln Tyr Asn Gln Thr Phe Lys Asp

50				55				60						
----	--	--	--	----	--	--	--	----	--	--	--	--	--	--

Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Ile
65 70 75

Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
80 85 90

Ala Ile Thr Ala Ala Ile Ala Met Asp Tyr Trp Gly Gln Gly Thr
95 100 105

Ser Val Thr Val Ser Ser Ala Lys Thr Thr Gly Pro Ser
110 115

<210> 10

<211> 238

<212> PRT

<213> Artificial sequence

<220>

<223> sequence is chimeric mouse/human

<400> 10

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr
1 5 10 15

Gly Val His Ser Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val
20 25 30

Pro Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser
35 40 45

Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp Phe
50 55 60

Leu Gln Arg Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met
65 70 75

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
80 85 90

Ser Gly Thr Ala Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Glu
95 100 105

Asp Val Gly Val Tyr Tyr Cys Leu Gln His Leu Glu Tyr Pro Tyr
110 115 120

Thr Phe Gly Gly Thr Lys Leu Glu Leu Lys Arg Thr Val Ala
125 130 135

Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys
140 145 150

Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro
155 160 165

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
170 175 180

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
185 190 195

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr
200 205 210

Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu
215 220 225

Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
230 235

<210> 11

<211> 466

<212> PRT

<213> Artificial sequence

<220>

<223> sequence is chimeric mouse/human

<400> 11

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr
1 5 10 15

Gly Val His Ser Gln Val Gln Gln Pro Gly Ala Glu Leu
20 25 30

Val Lys Pro Gly Ala Pro Val Lys Leu Ser Cys Lys Ala Ser Gly
35 40 45

Tyr Thr Phe Thr Asn Tyr Trp Leu Asn Trp Val Lys Gln Arg Pro
50 55 60

Gly Arg Gly Leu Glu Trp Ile Gly Arg Ile Asp Pro Ser Asp Ser
65 70 75

Glu Ile His Tyr Asp Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr
80 85 90

Val Asp Lys Ser Ser Ser Thr Ala Tyr Ile Gln Leu Ser Ser Leu
95 100 105

Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Leu Thr Gly Ile
110 115 120

Tyr Ala Met Ala Tyr Trp Gly Gln Gly Thr Ser Val Thr Val Ser
125 130 135

Ser Ala Lys Thr Thr Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
140 145 150

Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
155 160 165

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
170 175 180

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
185 190 195

Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
200 205 210

Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
215 220 225

Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp
230 235 240

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly
245 250 255

Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu
260 265 270

Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
275 280 285

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
290 295 300

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
305 310 315

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln
320 325 330

Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys
335 340 345

Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
350 355 360

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu
365 370 375

Glu Met Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly
380 385 390

Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
395 400 405

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp
410 415 420

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
425 430 435

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
440 445 450

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly
455 460 465

Lys

<210> 12
<211> 218
<212> PRT
<213> Artificial sequence

<220>
<223> sequence is chimeric mouse/human

<400> 12
Asp Val Val Met Thr Gln Thr Pro Leu Thr Leu Ser Val Thr Ile
1 5 10 15

Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu
20 25 30

Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro
35 40 45

Gly Gln Ser Pro Lys Arg Leu Ile Tyr Leu Val Ser Thr Leu Asp
50 55 60

Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp
65 70 75

Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Leu Gly Val
80 85 90

Tyr Tyr Cys Trp Gln Gly Thr His Phe Pro Arg Thr Phe Gly Gly
95 100 105

Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val
110 115 120

Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala
125 130 135

Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys
140 145 150

Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln
155 160 165

Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu
170 175 180

Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys
185 190 195

Val Tyr Ala Cys Glu Thr His Gln Gly Leu Ser Ser Pro Val Thr
200 205 210

Lys Ser Phe Asn Arg Gly Glu Cys
215

<210> 13
<211> 222
<212> PRT
<213> Artificial sequence

<220>
<223> sequence is chimeric mouse/human

<400> 13
Glu Val Gln Leu Gln Gln Ser Gly Pro Asp Leu Glu Lys Pro Gly
1 5 10 15

Ala Ser Val Lys Ile Ser Cys Lys Pro Ser Gly Asn Ser Phe Thr
20 25 30

Gly Tyr Tyr Ile His Trp Val Lys Gln Ser His Gly Lys Ser Leu
35 40 45

Glu Trp Ile Gly Arg Val Asp Pro Asn Asn Gly Phe Thr Ser Tyr
50 55 60

Asn Gln Lys Phe Lys Gly Lys Ala Ile Leu Thr Val Asp Lys Ser
65 70 75

Ser Ser Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu Asp
80 85 90

Ser Ala Val Tyr Tyr Cys Val Gly Asn Phe Phe Asp Ser Trp Gly
95 100 105

Gln Gly Thr Thr Leu Thr Val Ser Ser Ala Lys Thr Thr Gly Pro
110 115 120

Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly
125 130 135

Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
140 145 150

Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
155 160 165

Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser
170 175 180

Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
185 190 195

Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
200 205 210

Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
215 220

<210> 14

<211> 20

<212> DNA

<213> Artificial sequence

<220>

<223> Sequence is a primer

<400> 14

aaggctgtgc tgcttgccct 20

<210> 15

<211> 20

<212> DNA

<213> Artificial sequence

<220>

<223> Sequence is a primer

<400> 15

gagtggcaca aaggcctggg 20

<210> 16

<211> 372

<212> DNA

<213> Macaca fascicularis

<400> 16

atg aag gct gtg ctg ctt gcc ctg ttg atg gca ggc 36
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1 5 10

ttg gcc ctg cag cca ggc act gcc ctg tgc tac tcc 75
Leu Ala Leu Gln Pro Gly Thr Ala Leu Leu Cys Tyr Ser
15 20 25

tgc aag gcc cag gtg agc aac gag gac tgc ctg aat gtg 114
Cys Lys Ala Gln Val Ser Asn Glu Asp Cys Leu Asn Val
30 35

gag aac tgc acg cag ccg gag gag cag tgc tgg acc gag 153
Glu Asn Cys Thr Gln Pro Glu Glu Gln Cys Trp Thr Glu
40 45 50

cgc atc cgc gcc gtg ggc ctc ctg acc gtc atc agc aaa 192
Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
55 60

ggc tgc agc tca aac tgc gtg gat gac tca cag gac tac 231
Gly Cys Ser Ser Asn Cys Val Asp Asp Ser Gln Asp Tyr
65 70 75

tac gtg ggc aag aag aac atc acc tgc tgt gac acc gac 270
Tyr Val Gly Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp
80 85 90

ttg tgc aac gcc agc ggg gcc cat gca ctg cag ccg gct 309
Leu Cys Asn Ala Ser Gly Ala His Ala Leu Gln Pro Ala
95 100

gct gcc atc ctg gca ctg ctc cct gca ctc agt ctg ctg 348
Ala Ala Ile Leu Ala Leu Leu Pro Ala Leu Ser Leu Leu
105 110 115

ctt tgg agc ccc aga cag ctg t ag 372
Leu Trp Ser Pro Arg Gln Leu
120 123

<210> 17

<211> 123

<212> PRT

<213> Macaca fascicularis

<400> 17

Met Lys Ala Val Leu Leu Ala Leu Leu Met Ala Gly Leu Ala Leu

1

5

10

15

Gln Pro Gly Thr Ala Leu Leu Cys Tyr Ser Cys Lys Ala Gln Val
20 25 30

Ser Asn Glu Asp Cys Leu Asn Val Glu Asn Cys Thr Gln Pro Glu
35 40 45

Glu Gln Cys Trp Thr Glu Arg Ile Arg Ala Val Gly Leu Leu Thr
50 55 60

Val Ile Ser Lys Gly Cys Ser Ser Asn Cys Val Asp Asp Ser Gln
65 70 75

Asp Tyr Tyr Val Gly Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp
80 85 90

Leu Cys Asn Ala Ser Gly Ala His Ala Leu Gln Pro Ala Ala Ala
95 100 105

Ile Leu Ala Leu Leu Pro Ala Leu Ser Leu Leu Leu Trp Ser Pro
110 115 120

Arg Gln Leu

<210> 18

<211> 372

<212> DNA

<213> Macaca fascicularis

<400> 18

atg aag gct gtg ctg ctt gcc ctg ttg atg gca ggc 36
Met Lys Ala Val Leu Ala Leu Leu Met Ala Gly
1 5 10

ttg gcc ctg cag cca ggc act gcc ctg ttg tgc tac tcc 75
Leu Ala Leu Gln Pro Gly Thr Ala Leu Leu Cys Tyr Ser
15 20 25

tgc aag gcc cag gtg agc aac gag gac tgc ctg aat gtg 114
Cys Lys Ala Gln Val Ser Asn Glu Asp Cys Leu Asn Val
30 35

gag aac tgc acg cag ccg gag gag cag tgc tgg acc gag 153
Glu Asn Cys Thr Gln Pro Glu Glu Gln Cys Trp Thr Glu
40 45 50

cgc atc cgc gcc gtg ggc ctc ctg acc gtc atc agc aaa 192
Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
55 60

ggc tgc agc tca aac tgc gtg gat gac tca cag gac tac 231
Gly Cys Ser Ser Asn Cys Val Asp Asp Ser Gln Asp Tyr
65 70 75

tac gtg ggc aag aag aac atc acc tgc tgt gac acc gac 270
Tyr Val Gly Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp
80 85 90

ttg tgc aac gcc agc ggg gcc cat gcc ctg cag cca gct 309
Leu Cys Asn Ala Ser Gly Ala His Ala Leu Gln Pro Ala
95 100

gct gcc atc ctg gca ctg ctc cct gca ctc agc ctg ctg 348
Ala Ala Ile Leu Ala Leu Leu Pro Ala Leu Ser Leu Leu
105 110 115

ctt tgg ggc ccc aga cag ctg t ag 372
Leu Trp Gly Pro Arg Gln Leu
120 123

<210> 19
<211> 123
<212> PRT
<213> Macaca fascicularis

<400> 19
Met Lys Ala Val Leu Leu Ala Leu Leu Met Ala Gly Leu Ala Leu
1 5 10 15

Gln Pro Gly Thr Ala Leu Leu Cys Tyr Ser Cys Lys Ala Gln Val
20 25 30

Ser Asn Glu Asp Cys Leu Asn Val Glu Asn Cys Thr Gln Pro Glu
35 40 45

Glu Gln Cys Trp Thr Glu Arg Ile Arg Ala Val Gly Leu Leu Thr
50 55 60

Val Ile Ser Lys Gly Cys Ser Ser Asn Cys Val Asp Asp Ser Gln
65 70 75

Asp Tyr Tyr Val Gly Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp
80 85 90

Leu Cys Asn Ala Ser Gly Ala His Ala Leu Gln Pro Ala Ala Ala
95 100 105

Ile Leu Ala Leu Leu Pro Ala Leu Ser Leu Leu Leu Trp Gly Pro
110 115 120

Arg Gln Leu

<210> 20
<211> 35
<212> DNA
<213> Artificial sequence

<220>
<223> Sequence is a primer

<400> 20
actatgaagc tttgcagctc atcccttcac aatcg 35

<210> 21
<211> 42
<212> DNA
<213> Artificial sequence

<220>
<223> Sequence is a primer

<400> 21
gaattcggat ccaccatgaa gaccgttcc ttctcctgc tg 42

<210> 22
<211> 17
<212> DNA
<213> Artificial sequence

<220>
<223> Sequence is a PCR primer

<400> 22
cctgctggcc acctact 17

<210> 23
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Sequence is a primer

<400> 23
ccttcacaat cgggctat 18

<210> 24
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Sequence is a PCR primer

<400> 24
acccacgcgt ccggctgctt 20

<210> 25
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Sequence is a PCR primer

<400> 25
cgggggacac cacggaccag a 21

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